FL-8SE Operation Manual

CONTENTS

General Description	2
Specifications	3
Unit Installation	4
Power Connection	4
Transducer Installation	5 - 8
Operation	9 - 10
Typical Indications	11 - 14
Maintenance	15
Operational Questions & Answers	16 - 20
Transducer Beam Angle Chart	21
Trouble Shooting Chart	22
Accessories and Other Products	23 - 25
Transducers	26 - 27
Service and Support	28

Founded in 1960, Vexilar, Inc. has a long history of bringing revolutionary technology to the sport fishing industry. Just some of the Vexilar firsts include: the first liquid crystal display, the first fish alarm, the first three color display, and the first CRT and straight line paper graphs, for the sport fisherman. The FL-8SLT was the first true interference Rejection unit. And now with the FL-8SE we bring you the next generation.

GENERAL DESCRIPTION

The FL-8SE is a compact and lightweight depth sounder designed for serious anglers. Besides indicating depth, the unit also shows changes in bottom content and conditions. It can also discriminate between large underwater targets, such as fish, and smaller targets such as bait fish and plankton.

The unit transmits bursts of high frequency pulses, which are converted from electrical to mechanical energy by the transducer. These "sound" pulses radiate from the transducer downward and are reflected back up to the transducer where the energy is converted back to electrical signals. The FL-8SE then processes these signals and displays them.

The circular display is accomplished by attaching an LED (Light Emitting Diode) to a wheel, which is then spun at a high speed in the clockwise direction. This allows for an extremely high speed update. The bottom, as well as other targets, can be displayed as red, orange, or green to indicate strong, medium and weak signals respectively. The FL-8SE also has patented Interference Rejection (IR) Technology. This lets the user "filter out" unwanted interference from another nearby depth sounder. With two models available, deep and shallow, and a wide variety of accessories to choose from, the Vexilar FL-8SE is a powerful tool for today's angler.

SPECIFICATIONS

Operating Voltage:	10.5 - 15 Volts (12 Volts Nominal)
Current Draw:	275 mA
Power Output:	400 Watts (Peak to Peak)
Frequency:	200 kHz
Resolution:	525 Segments
Target Separation:	2.65" Min.
Display Colors:	3 - Red, Orange, and Green
Dimensions:	4.4"H x 6"W x 2.5"D
Weight:	1.1 Lbs.

Depth Scales:

0-20', 0-30', 0-40', 0-60', 0-80', and 0-120' - Shallow Model

Or

0-20', 0-30', 0-40', 0-60', 0-80', and 0-240' - Deep Model

Beam Angle:

If your transducer is not marked, you can determine the beam angle by the dimensions of the transducer face. Measure the shortest distance across the face of the transducer. 19° puck and Ice-Ducer transducers measure about 1 1/2". 9° and dual beam transducers will be about 2 1/2" across the face.

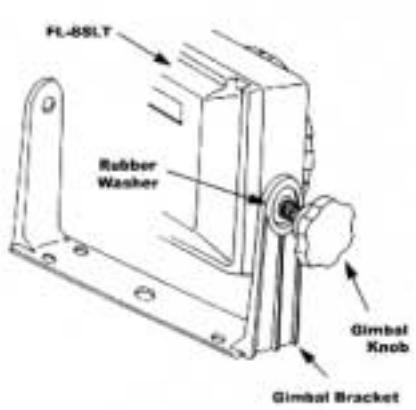
Features and Specifications Subject to Change Without Notice

INSTALLATION

To make the FL-8SE work, you must provide the unit with power and mount the transducer in an appropriate location.

UNIT INSTALLATION

Find a convenient place to mount the unit. This may include a boat seat, deck, dash, or a portable case. Make sure that there is plenty of room for the unit to tilt and/or swivel freely without the cables binding behind the unit. Once you have found a spot, remove the unit from the gimbal bracket. Securely attach the bracket to the mounting surface.



POWER CONNECTION

Plug the flat 3 pin connector into the back of the unit. Find the closest source of 12 volts and run the cord to it. Keep the cord away from sharp metal edges and avoid tight places where the cord may get crushed. Connect the red wire to positive and the black wire to negative or ground. If the cord provided is not long enough, more can be added. Use 18 gauge wire minimum. It is recommended that a 1 amp in-line fuse be placed in the positive line as close to the power source as possible to protect against any shorts in the wiring.

TRANSDUCER INSTALLATION

There are three basic types of transducers to consider: High Speed, Puck Style, and the Ice-Ducer System.

HIGH SPEED TRANSDUCERS

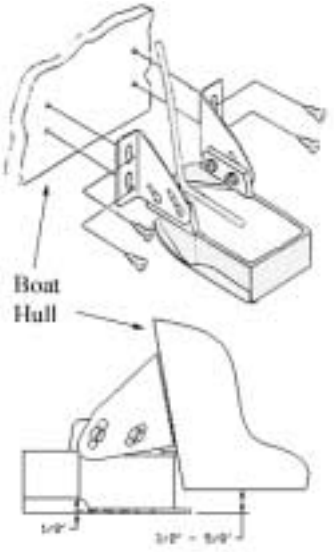


Figure E

When choosing an area to mount the transducer, keep in mind that you need clear water flow across the face of the transducer to insure a clear reading at all speeds. Try to stay away from rivets, ribs, or strakes that would be just in front of the transducer. They can disturb the water and scramble the reading.

With the mounting bracket attached to the transducer, hold it up to the boat where you are planning to mount it. Mark the holes on the transom, or mounting plate, so that when the bottom of the transducer is flush with the bottom of the boat the holes are located at the bottom of the bracket slots. This gives you room to "fine tune" the position of the transducer and optimize your reading after you've put the boat in the water. Ideally, the transducer should be just under the bottom of the boat. However, you may need to lower it 1/2" to 5/8" to get a clear reading at top speed.

Drill out the holes and tighten the bracket to the hull securely. Be sure to seal any holes drilled into the transom with silicone to prevent water from leaking into the boat. Give the transducer a slight tilt downward so that the back is about 1/8" lower than the front. Tighten the bracket screws and nuts securely. Run the transducer cord up to the unit. Plug the transducer connector into the back of the unit and screw the retaining ring down snugly

PUCK STYLE TRANSDUCERS

There are three ways in which a Puck Style transducer can be mounted. It can be mounted In-Hull, on an electric trolling motor, or portable (with a suction cup or on an arm of some type).

IN-HULL MOUNTING

This method, gluing the transducer to the hull, gets the same results as if you were using the High Speed transducer only there are no holes to drill in the boat and there is no transducer on the transom to get damaged by impact.

Finding the best location for the transducer before mounting is critical. Choose a flat smooth spot near the center of the bilge and near the back of the boat. It is a good idea to make a "test run" before you permanently install the transducer to make sure that you can indeed get a reading through your hull, and when the boat is on plane. Put about a half inch of water in the bilge and hold the transducer in the intended location. Move the transducer around until you get the best reading. Mark the spot.

To install the transducer clean the spot of mud and oil. Using an epoxy or silicone glue make a puddle about the same diameter as the transducer on the hull. Place the transducer in the glue. Press it down firmly, gently twisting it back and forth, making sure that there are no air bubbles in the glue between the transducer and the hull. Let the glue dry completely before turning the unit on.

Run the transducer cord up to the unit taking the same care as you did when you ran the power cord. Plug the transducer connector into the back of the unit and screw the retaining ring down snugly.

TROLLING MOTOR MOUNTING

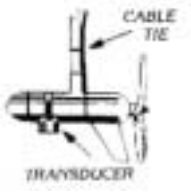


Figure G

To attach a Puck Style transducer to a trolling motor, use a hose clamp or a large cable tie. Notice the slots in the transducer for this purpose. Locate the transducer on the bottom of the lower unit as in figure G. Run the cable up the shaft using cable ties to hold it in position. Make sure that the movement of the trolling motor will not damage the cable. Plug the transducer connector into the back of the unit and screw the retaining ring down snugly.

PORTABLE MOUNTING

Optional suction cup brackets can be used to temporarily attach a transducer to the transom or side of the boat. The cups should be placed in a location where it will not be torn off when the boat goes high speed. It is a good idea to tie on a safety rope in case the cup does let go.

There are three suction cup brackets available for the FL-8SE. The BK0023 is made to attach the 19 degree Puck style transducer to a boat for use at slow speeds. The BK0044 suction cup brackets is made to attach the high speed transducers to a boat for high speed uses. See page 26 for details.

An arm can also be used to hold the transducer. Simply attach the transducer to the end of the arm using cable ties or tape. If the arm is constructed of metal tubing insulate the transducer from the arm by wrapping electrical tape around the arm. This prevents "ringing" which can be displayed as noise near the surface.

Run the transducer cord up to the unit using cable ties to hold the cord in place. Plug the transducer connector into the back of the unit and screw the retaining ring down snugly.

THE ICE-DUCER™ SYSTEM*

The Ice-Ducer system provides a quick and easy way to set up the transducer for ice fishing. All of the adjustments needed to find the true perpendicular point are done automatically. To use the Ice-Ducer, simply adjust the transducer to the desired depth and drop the assembly in the ice hole.

The Ice-Ducer System

There are three main components to the Ice-Ducer system. They include the transducer, float, and the stop. The transducer comes assembled with the connector already installed. The stop is put on by passing the transducer cord through the slit in the side of the stop. Make sure that the tapered or rounded end is facing down, toward the transducer. The float is installed between the stop and the transducer by, again, passing the transducer cord through the slit in the side. Make sure the countersunk hole is facing up towards the top.

To use the Ice-Ducer, adjust the stop to allow the transducer to float at the desired depth. A six inch minimum is recommended in order to make sure that the transducer will indeed be pointing straight down. The most it should be down is to the bottom of the ice hole. If the transducer is below the bottom of the ice it can cause tangling problems when bringing in fish.

If you run into problems when using the Ice-Ducer and you can't see your bait try this, rub the bottom of the transducer with water to eliminate any residue or air film. This insures good contact between the transducer and the water. Check the length of cord between the float and the transducer to make sure there are no kinks in the cord that will cause the transducer to shoot off to the side

*Patent no. 5,546,362

OPERATION

There are three main controls for the FL-8SE. They include Power and Range control, Gain, and Interference Rejection.

POWER AND RANGE CONTROL

The knob located at the bottom of the control panel turns the unit on and selects which range is to be used. The center position is the Off position. There are six depth ranges to choose from.

S1 - 0-20'	D1 - 0-30'
S2 - 0-40'	D2 - 0-60'
S4 - 0-80'	D4 - 0-120'
	(D8 - 0-240' Deep Model)

To activate the unit and select the appropriate range turn the knob to the left or right. To read the correct depth on the display you must correlate your range setting with the proper scale on the display. Notice that the shallow ranges are marked in white and the deep ranges are marked in yellow. For a range selection of S1 you would read the white numbers on the display. For a range selection of S2 you would read the white numbers times two, and times four for S4. The same is the case for the D ranges, only you would read the yellow numbers on the display.

For example, figure J shows the leading edge of the bottom at nine feet on the white scale. With a range setting of S1 you would interpret this as nine feet deep. With a range setting of S2 you would interpret this as 18 feet deep. With a range setting of D1 you would look at the yellow numbers and read the depth as slightly over 13 feet deep. D2 would read 26 feet. A setting of D4 would read the depth at 52 feet (13 x 4).

GAIN CONTROL

The knob located at the top of the control panel is the gain control. This controls the amount of signal that you see on the display. A gain setting of zero will display a minimum amount of signal while a gain setting of ten will show the maximum amount. Different conditions will require different gain settings. Deeper water will require higher gain than shallow water. A weedy bottom will demand a lower gain setting than a clean bottom. Keep the gain level low. Too much gain can "wash out" the targets that you want to see. Generally, it is a good idea to set the gain at an appropriate level and leave it there. Only change the gain level if the water depth or conditions change.

INTERFERENCE REJECTION*

The orange button in the middle of the panel controls the Interference Rejection feature. The red LED to the upper left of the I.R. button tells you if the rejection circuitry is on. The I.R. feature has ten steps of rejection to let you eliminate unwanted interference from another nearby depth finder. When you turn on the FL-8SE on, the I.R. automatically comes on to the first step. If necessary, press the I.R. button repeatedly until the interference is eliminated. You can press the button nine times before you get back to the first step again. Turning the unit off and then on again will also reset the I.R. back to the first step. To turn the I.R. feature off press the Gain control knob. The red LED will also go off.

TIP - If running two units with the Vexilar Interference Rejection feature, it is best to turn the I.R. off on one unit and then eliminate the interference using the other unit.

* Patent #5,515,339

TYPICAL INDICATIONS

The three-color display on the FL-8SE can give you a lot of information if you know how to read it. A color represents the strength of a signal. A red color indicates a strong signal, an orange color indicated a medium strength signal, and green represents a weak signal. The colors will combine to indicate objects, such as bottom echoes, structure, fish, and plankton. The way in which they combine, and the speed in which they do so, tells you what is what.

The following examples illustrate some of the different conditions that you may encounter and what the display on the FL-8SE may look like.

HARD BOTTOM

Under these conditions the bottom will be almost all red, although you will always see some orange and green at the trailing edge, as in figure J. A sharp red leading edge tells you that the bottom is very clean. If you were to move from a hard bottom to a softer -bottom you would see a change in color to more orange and green. Try not to change the Gain setting as you move around.

WEEDY BOTTOM

In weedy conditions the bottom can be harder to determine. Figure K gives you an idea of what it may look like. To find the bottom in weeds it is important to keep the gain control low. If the gain is too high the bottom and the weeds will "run together" making it difficult to determine the actual depth. Some weed beds can be so dense that they will display as solid red, even at medium gain. If you fish in these conditions often you may want to add an S-Cable to your system (see page 27).

Fig. J

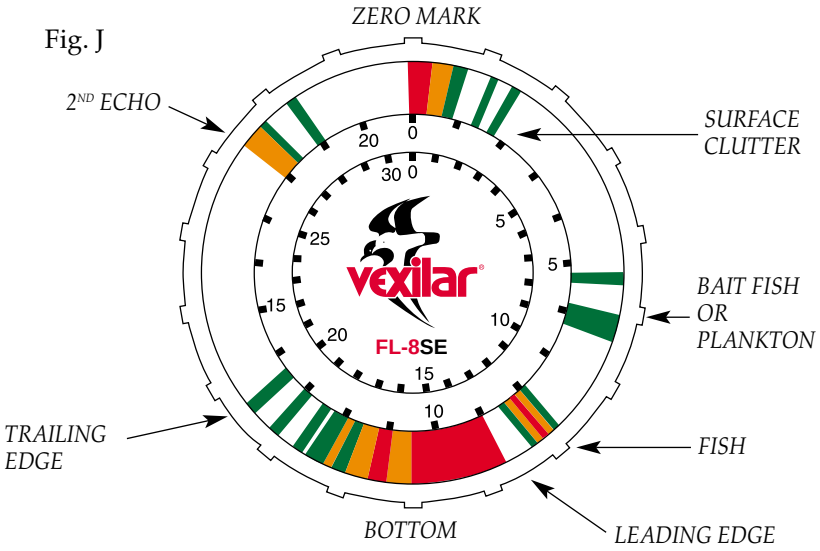
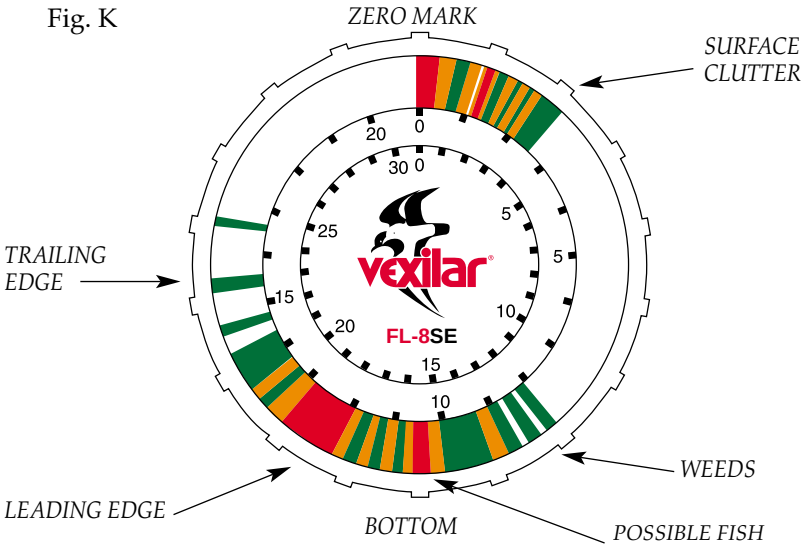


Fig. K



SEEING FISH

The FL-8SE sees a fish as a target, much like the bottom. It has a leading edge, a width, and color content. Refer, again, to figure J. If the range setting is S x2 then the fish is just over two feet above the bottom. It is a fairly wide target and is made up of all three colors. This should be recognized as a significant fish, something you may want to catch. The targets that appear just above this fish are smaller and there is no red. Here is where target identification gets a bit trickier. Since we do not know the position of the targets in the cone of sound we cannot readily identify them. For example, the green target at ten feet could be a small piece of floating debris or a single small baitfish in the center of the cone or it could be a large game fish at the very edge of the cone.

In the weeds spotting fish is more difficult. Figure K shows a bottom at twelve feet (S1). The weeds extend from the bottom up to about eight feet. Notice the red target at ten feet is marked "possible fish". We cannot say that it is a definite fish because the weeds around it are dense enough to give a red signal themselves. Again, keep the gain as low as you can for reading in the weeds. If you can't turn the gain down far enough you may want to get an S-Cable to cut down the power of your unit.

CLUTTER VS. NOISE

Clutter is created by very small targets in the water. It is usually displayed as thin green or orange lines. Clutter can include bait fish, plankton, floating debris, or air bubbles. Although clutter is not fish, it can be useful in finding fish.

Noise is, usually, electrical noise, which is in the engine ignition, radios, or trolling motors. It can be displayed as red, orange, or green lights that flash as the interfering equipment is operated. The Interference Reject circuit of the FL-8SE will block out most noise, but sometimes, extra measures are required to eliminate it. Please contact our service department (page 28) if you have interference that you cannot get rid of.

HIGH SPEED OPERATION

The FL-8SE can accurately read depths at almost any boat speed. Here high speed is defined as any speed at or above the planning speed of the boat. Once the boat starts to plane out, turbulence will develop behind the transom. If you have the wrong type of transducer, or it is poorly mounted, the unit will lose the bottom at a certain boat speed. This is due to all of the air bubbles in the turbulent water.

ICE FISHING

Ice fishing brings out the best in the FL-8SE. The stable platform of ice lets you concentrate on your bait and the fish around it. The bottom becomes less important because it never changes. The only movement on the display is of your bait and fish.

Unlike open water use, the direction in which the transducer is pointed is very critical. You want your bait to be located in the dead center of the cone sound. This way you can see very small baits at low gain settings and also see fish come in from all sides. If you are not using the Ice-Ducer system, the transducer must be attached to an adjustable arm so that it can be manually pointed directly at the bait. Sometimes it helps to attach a bubble level to the transducer so that you know when it's straight.

After your system is properly set up, adjust the gain until you see your bait as a green target. You may need to readjust the gain control to keep the bait green. This is due to the changing condition and position of your bait. If you are using a swimming bait or a lure that darts to the side as it's jigged, you will see the color change as the bait moves. Sometimes it may even disappear if the bait goes out of the cone of sound.

Fish will appear at the edge of the cone as a green target. If the fish moves closer to the bait it will change from green to orange. If it moves up, right next to the bait, it will change to red. If the fish leaves and you can no longer see your bait, chances are, you've been robbed.

MAINTENANCE

PERMANENT MOUNT

With permanent mount applications, the power cord is left connected to the source, the transducer is not easily removed, and the gimbal bracket is screwed to the seat, deck, or dash. Under these conditions maintenance is very simple because nothing changes once the unit is installed. Because of this problems can sneak up on you if you're not careful.

The unit should be removed from the bracket whenever the boat is parked to guard against theft. Don't store it in a place that may fill with water.

Power connections need constant checking. Corrosion can develop and cause intermittent or loss of operation. Connections made to battery posts need extra attention because of the battery acid.

The transducer should be checked for scratches and cracks which can reduce the unit's sensitivity. Cuts or breaks in the cord should be repaired as soon as possible so corrosion doesn't attack the wire. Periodically clean the face of the transducer with a mild detergent. An oily film can develop which will cause weak readings.

PORTABLE MAINTENANCE

In portable applications the unit is generally mounted to a carrying case and the transducer is frequently removed, as is the power. These conditions can cause more wear and tear than a permanently mounted unit.

In addition to the previously mentioned maintenance items, be sure to check for broken or pulled wires, loose screws or hardware, and, above all, battery condition.

OPERATIONAL QUESTIONS & ANSWERS

Where Should The Gain Control Be Set?

For ice fishing - the gain control should be set so the bait you are fishing with is shown in green color on the dial. This color should be set while the lure or bait is at the normal fishing depth. As the bait is raised toward the surface the colors will turn to orange and possibly red, just below the surface. This happens because as the bait is raised towards the surface the signal strength from the bait gets stronger, resulting in color change.

For open water fishing - set the gain control so as to get a strong bottom echo along with a second echo. You may need to switch to a deeper range to see the second echo. The leading edge of the bottom echo will show a solid Red band, then bleeding into the orange color, then the trailing edge of the bottom will bleed from orange into the green color. Good bottom echoes, most of the time, will show all three colors, starting with Red, Orange, into Green.

Why Can't I See My Bait While Ice Fishing, or like I can while ice fishing?

For Ice Fishing - In order to see your bait it must be in the center of the cone and you must have your gain turned up high enough to see it.

For open water - With the position of the transducer mounted to the boat, it is hard to get your bait there, and with the motion of the water it makes it difficult to keep it there. If all conditions are right you will be able to see your bait.

Why Do Some Lures Show Up Better Than Others?

The amount of Reflective Surface Area on the lure is the main reason. A thin vertical lure is not as easy to see as a horizontal fat lure.

What Color Should Fish Be?

For ice fishing - with the FL-8SE being operated with the perpendicular position found, the fish target entering the outside of the cone of sound will appear in green, as it moves towards the bait it will add some orange into the center of the signal, and if the fish continues to the perpendicular line under the transducer, red will be added to the center of the fish target. These color changes will take place automatically without adjusting the gain control. This color change feature allows the operator to observe the fish moving towards or away from your bait.

For Open Water - The fish can appear the same way on open water as they do ice fishing. The same rules apply. Although, instead of the nice stable platform of ice you have wave and boat motion to contend with. Usually the boat moves more than the fish. If you see a red target separated from the bottom you can bet that it's a fish. If all you see is green or orange you won't know if it's a fish until it turns red

How Long Will My Battery Last On The FL-8SE?

Run Time - The FL-8SE draws about 275 mA, about a quarter of an amp of current The unit will run good until the battery voltage drops to about 10 volts. Beyond that you will notice lower sensitivity, as well as, a much dimmer display. The Vexilar Model V120, a 9 amp/hr battery, will run the FL-8SE for about 24 hours straight.

Battery Life - This applies only to rechargeable batteries. The largest influence on battery life is your charging habits. To get the most out of your battery follow these simple tips; Charge the battery as soon as possible after each use or, if it's cold, as soon as it reaches room temperature. Do not overcharge or under charge the battery. Use a battery charger that has an automatic shut-off feature. A battery should be stored, fully charged, in a cool place. Charge it once a month or so when in storage to make sure it's full.

How Far Down The Ice Hole Does The Ice-Ducer Have To Be?

You need water contact only to get a depth reading. The bottom or the face of the transducer, only, has to make contact with the water in order to get a good transfer of sound waves into the water

There are times (usually deep ice - 36" or more) when the transducer needs to be placed at the bottom of the ice. The zero indication of the flasher will be unusually wide, 8 to 10 feet wide. This can be caused by the transmitted signal ringing back and forth through the depth of the hole. By extending the transducer to the bottom of the hole this ringing can be eliminated. Now the lake depth must be mentally corrected for the new position of the transducer.

Will The FL-8SE Read Through The Ice?

YES! It will easily read through ice, provided the ice is CLEAR ICE and not MILKY ICE. Remember, the transducer must have GOOD CONTACT with the surface of the clear ice. A bottom indication should appear on the sounders dial at an appropriate depth. The ice surface must be wet; water works well.

Why Do I Get Interference?

Electrical interference can be caused by other electrical equipment that put unwanted signals on the power line. It usually can be reduced or eliminated by simple fixes such as resistor spark plugs and wires on the engine or better grounding on the electrical system. Sometimes, however, there can be equipment problems that need shop service.

Another kind of interference comes from another depth finder operating on the same frequency nearby. The FL-8SEs interference rejection circuitry is designed to knock out most or all of this, but sometimes severe conditions can still cause interference. The two factors that determine if this happens are: a) the depth of the water and, b) how

far apart the two sounders are placed. If this interference is happening, each of the sounders will have a non-stop rotating light moving around the dial. One moving light rotates around the dial clockwise and on the other sounder the light will rotate in the counter clockwise direction. To eliminate this problem you can either move the sounders farther apart or shut one off.

Which Side of the Transducer Should Be Aimed Toward The Lake Bottom?

Most of today's transducers have two sides to them. Side A is the side that the cable enters the transducer and usually has holes, slots, or some method to attach a bracket to. Side B is usually flat but may have different shapes, such as round, square, or arrow shaped. The Side B or the Flat side should be aimed toward the lake bottom.

What Does the Zero Light Mean?

The zero light is actually the start point of the units transmission of sound waves. On the display it indicates the zero foot point. This signal has very little use. Sometimes a portable transducer arm can cause "ringing" which will display as a very wide zero. The width of the zero indication should never be more than 5 feet wide. Most problems occur when the arm, which the transducer is attached to, is metal. Plastic or wood transducer arms cause little problems. To test your portable box system, in air, turn the FL-8SE on, range 1, and with the gain control turned to maximum position, note the width of the zero indication. If the zero indication is wider than 5 feet, squeeze the transducer and metal arm together with your hand. While squeezing, if the zero gets smaller you need to work on the transducer attachment. To solve the problem, especially with a metal transducer arm, remove the transducer from the metal arm. Then tape three layers of black electrical tape around the arm in the flat section of the arm, then lay the transducer against the tape and continue to tape it onto the flat section on the metal arm. The tape

creates an insulation layer between the metal arm and the plastic housing of the transducer. This insulation layer eliminates any transmission vibrations caused when the unit transmits the signal to the water.

What Does the Bottom Light Mean?

Besides depth the bottom light can give you a lot of information. The width and color content of the bottom signal can tell you what type of bottom it is.

Ice fisherman can look for movement of color in the bottom signal. If you see a red line move through the orange or green part of the bottom signal, it's probably a fish close to the bottom and away from the center point.

Open water fisherman usually can't see this because the boat moves too much. You can, however, see changes in the bottom type as you move along. The more red in the signal, the harder the bottom. The more green and orange in the softer the bottom

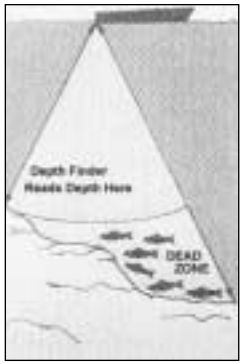
Why is the Bottom Indication so Wide?

The width of the bottom is actually the summation of the radius of coverage on the bottom along with bottom penetration, depending on hardness. The color and width are controlled by the gain settingl. The leading edge of the bottom light is the actual depth. The color beyond is the area, within the cone of sound, which is around the center point of the circle you are covering on the bottom.

TRANSDUCER BEAM ANGLES VERSES DIAMETER OF COVERAGE AND PERFORMANCE

Depth	9º	12º	19º
10′	1.6′	2.2′	3.4′
20′	3.2′	4.3′	6.7′
30′	4.7′	6.3′	10.0′
40′	6.3′	8.4′	13.4′
50′	7.9′	10.6′	16.7′
60′	9.4′	12.6′	20.8′
70′	11.0′	14.7′	23.4′
80′	12.6′	16.8′	26.8′
90′	14.2′	20.0′	30.1′
100′	15.7′	21.0′	33.5′
120′	18.9′	25.2′	40.2′
150′	23.6′	31.5	50.2′
300′	47.2′	63.0′	100.4′

Beam angle has a large effect on the performance of your depth finder. There is more to it than simply area of coverage. The correct beam angle to use depends entirely on what you are trying to do with your sonar. If you are fishing for suspended fish then you probably would be very pleased with the performance of the 19º. However, if you were going after fish that are hanging right on the bottom, along a steep drop-off, you would have better results with the 9º. Here's why;



Dead Zone is an area within the transducers cone of sound that is blind to you. The wider the beam angle the greater the possible dead zone. The sonar will mark bottom as the nearest distance it sees. If you are fishing over a slope, it may see the high side of the slope, at the edge of the cone, and mark that as bottom. The fish that are hanging on the bottom in the center of the cone will be invisible to you because they are actually within the bottom signal on your depth finder. A narrower beam angle will reduce this effect.

Your depth finder puts out a constant amount of power. It does not matter where you have the gain level set. Gain simply controls how much you amplify the signal that is bounced off of the bottom. Therefore, a narrow beam transducer will appear to be much more powerful than a wide beam transducer. This is because you are putting that same amount of power into a smaller area. This can be an advantage if you are fishing in deep water or a detriment if you are fishing shallow. A narrow beam transducer can be overpowering in shallow water. The use of an S-Cable will solve this problem, though.

TROUBLE SHOOTING CHART

Symptom	Possible Cause
Unit is turned on, but no display and motor is not running.	Check for bad connections, proper hook up polarity, and make sure you have a good, fully charged, battery.
Unit is turned on and the motor is running, but there is no display.	Battery voltage too low. The unit will show no display if the voltage is below 10 volts. Check while unit is running.
Unit runs well for a short time, then lights fade out or unit quits.	Bad battery or connection. Voltage may be good when checked, but will fall as as unit runs.
Unit runs and shows display light, but does not read depth.	Transducer is not plugged in, not in contact with the water.
Unit works, but needs high gain to see bottom or targets.	Transducer is not aimed correctly or needs to be cleaned. 19º transducers will have trouble seeing small targets deep.
Unit works, but has too many lines on the display. Can't tell what is what.	Improper transducer adjustment. Also, gain may be set too high or ,if gain is set to minimum, you may need an S-Cable (see page 27).
Unit works well when sitting still or at when slow trolling, but loses reading at higher speeds.	Improper transducer type, installation, or adjustment causing a loss of clear water flow across the transducer when the boat reaches a certain speed.
Unit shows noise when engine or electric motor is turned on.	Defective engine or electric motor. Also can be improper grounding or missing ground in electrical system.
I.R. does not work. Can't eliminate interference from other depth finder.	Gain may be set too high or the other unit has a problem.

Accessories for the FL-8 SLT

PORTA CASE

The unique P-160 Porta Case holds your FL-8, FL-8SE or other manufacturer's sonar or GPS. It has space for your transducer, a rechargeable battery, and the Vexilar Battery Status Indicator. Just set it down on the ice or boat seat, position the transducer and turn on your flasher. The round base is just the right size to fit down inside a standard 5 gallon bucket.

ECONOMY CARRY CASE

The new P-100 carrying case is simple, sturdy, and inexpensive. It is an easy way to mount the Vexilar FL-8 and many other depth finder and GPS. Made of heavy ABS plastic, this case can take abuse at any time of year.

SEALED LEAD ACID BATTERY WITH CHARGER

This V-120 Battery was designed for sportsmen on the go, with rugged construction and design features that make it ideal for summer and winter use. With a near "bullet-proof" charger, this system packs enough power to run your equipment for hours, and for years to come.

BATTERY STATUS INDICATOR

The T-130 Battery Status Indicator works with all 12 volt lead acid batteries and can be permanently mounted or used as a portable unit. It monitors your battery constantly as it is discharging and charging. Battery charge status is indicated with highly visible LED lights. Portable durable, waterproof and compact. Draws very low current.

L-100 Flexible Night Light

It simply attaches to the Porta Case or other type of case to get light where it is needed. Just attach with the wing nut provided and hook up the battery clips. Extra bulb is included.

S-240 Sun Hood

The Sun Hood gives you full screen visibility in even the most extreme sunlight. Inexpensive and easy to take on and off.

More Depth Sounders From Vexilar

For a free color brochure please ask your dealer or contact Vexilar.

The EDGE² Model LC-507

The Edge, LC-507, is an amazing depth sounder. It is unique in that it is like having two totally different sonar in one unit. It comes with two transducers, a 107 kHz, 38 degree, and a 400 kHz, 10 degree. The idea is that you mount the transducers right next to each other and compare the two different views directly on the split screen. You can also run either beam at full screen. Speed, temp, and voltage sensors are included. This unit was designed for the very serious fisherman. It has a lot of powerful features, but is one of the easiest units ever made to understand and operate.

The FL-18

The FL-18 is the first ever flasher to incorporate a split-screen zoom. and with two modes of zoom, a low power mode for shallow water, and a super bright display, this unit is the ultimate three-color flasher.

The Boundary Waters Model LC-10

The LPS-1 is a simple to use handheld digital depth finder. Use it for fishing, ice fishing, canoeing, backpacking, and scuba diving. runs on one 9-volt battery.

The Deptherm Model 104

The fishing odds are on your side when you use DEPTHERM. It tells you quickly and accurately what temperatures are below your boat and it also tells you the temperature at a specific depth. If your DEPTHERM indicates that the water is too cold or too warm for the species you're after, you can quickly move, just as the fish do.

Transducers and Accessories

TB0044 - 19° Transom Mount High Speed Transducer. Comes with the Mounting Bracket and 25 Feet of Cable.

TK184 - Complete Mounting Kit. Comes with TB0084 Transducer, FL Power Cord, Unit Mounting Bracket, and all the Hardware You Need to do the Job Right.

TB0084 - 12° Transom Mount High Speed Transducer. Comes with the Mounting Bracket and 25 Feet of Cable.

TB0030 - 9° Transom Mount High Speed Transducer. Comes with the Mounting Bracket and 25 Feet of Cable.

TB0045 - Dual Beam 9/19° Transom Mount High Speed Transducer. Comes with the Mounting Bracket and 25 Feet of Cable. Built-In Switch Box must be Mounted within 3 Feet of the Depth Finder.

BK0044 - Optional Suction Cup Mount for all of the above High Speed Transducers. Dual suction cups for extra holding power.

TB0023 - 19° Puck Transducer. For Mounting on a Electric Trolling Motor, In-Hull Mounting, Portable Use, or Ice Fishing. Comes with 25 Feet of Cable87

TK123 - Complete Mounting Kit. Comes with TB0087 Transducer, FL Power Cord, Unit Mounting Bracket, and all the Hardware You Need to do the Job Right.

BK0023 - Optional Suction Cup Mount for TB0023.

TB0027 - 9° Puck Transducer. For Mounting on a Electric Trolling Motor, In-Hull Mounting, Portable Use, or Ice Fishing. Comes with 25 Feet of Cable.

TB0087 - 12° Puck Transducer. For Mounting on a Electric Trolling Motor, In-Hull Mounting, Portable Use, or Ice Fishing. Comes with 25 Feet of Cable.

TB0032 - Dual Beam 9/19° Puck Transducer. For Mounting on a Electric Trolling Motor, In-Hull Mounting, Portable Use, or Ice Fishing. Comes with 25 Feet of Cable. Built-In Switch Box must be Mounted within 3 Feet of the Depth Finder.

TB0050 - 19° Ice-Ducer. Self Leveling and Floats in the Ice Hole. Comes with Float, Stopper, and 7 Feet of Specially Designed Cable.

TB0051 - 9° Ice-Ducer. Self Leveling and Floats in the Ice Hole. Comes with Float, Stopper, and 7 Feet of Specially Designed Cable.

TB0052 - Dual Beam 9/19° Ice-Ducer. Self Leveling and Floats in the Ice Hole. Comes with Float, Stopper, and 7 Feet of Specially Designed Cable. Built-In Switch Box must be Mounted within 3 Feet of the Depth Finder.

TB0080 - 12° Ice-Ducer. Self Leveling and Floats in the Ice Hole. Comes with Float, Stopper, and 7 Feet of Specially Designed Cable.

"S" CABLE - The S-Cable (short for Suppression Cable) is used to reduce the output power of the FL-8 or FL-8SE. This can often help clear up readings in shallow or cluttered waters. Simple installation between the unit and transducer.

SB-100 Switch Box - The SB-100 Switch Box allows you to run two transducers on one FL-8 or FL-8SE unit. You could switch between a trolling motor mounted transducer and a stern mounted one or, while ice fishing, switch between the hole you are fishing from and a remote hole. Also, the **SB-200** is available as a switch box for two units and one transducer.

Service and Support

If you find that you need help please contact us. Have ready the model number and, if possible, the serial number of your product. Be sure to read the Question and Answer and Trouble Shooting sections first.

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